

Work Order ID 96178

January-23-13 12:57:51 PM

96178

Page 1

Item ID: D4131-045

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Base Assembly

Stop

NS2

Start Date: 1/21/13 Start Qty: 4.00

4

Cust Item ID:

Required Date: 2/06/13 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan:

Date: 13-01-24

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D4131	B
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0.00

100

Waterjet

FLOW CNC Waterjet

304 .050

Memo

1-Cut D4131-3 as per Dwg

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.00

4 0

Jm 13-3-18

4 0

Jm 13-3-18

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS							
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup													
Other													
Process													
Supplier													
Training													
Unapproved													
FAULT CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>			
										<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other			

Work Order ID 96178

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Page 2

Item ID: D4131-045

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Base Assembly

Stop

NS2

Start Date: 1/21/13 Start Qty: 4.00

4

Cust Item ID:

Required Date: 2/06/13 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
						Stop	*NR2*
	QC:	Date:	SPC (Y/N):	Date:			

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC	QC8- Inspect parts - second check Memo	0.00 0.00	DAS 16 S-03	B0310	(+4)				

130 *130* Brake NC	Bend as per dwg Memo	0.00							SP 13-03-21
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140 *140* Small Fab		0.00							
	Memo	0.00							
	INSTALL LABEL PLATE AS PER DWG								

4 FF 13-04-02

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS									
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other								
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector						
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <hr/> <hr/> <hr/>	

Work Order ID 96178

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96178

Page 3

Item ID:	D4131-045	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Base Assembly					
Start Date:	1/21/13	Start Qty: 4.00	*4*	Cust Item ID:		
Required Date:	2/06/13	Req'd Qty: 4.00	*4*	Customer:		
Reference:						
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	SAS 21 1542			4			
160 *160* Packaging Packaging	Identify as per dwg & Stock Location: Memo	0.00 0.00	WS002						13/1/13 (G)
170 *170* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							13/4/13 (J)

QHBOH3

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order:			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear			General								
Bending			Bend			Grain		Ovalized		Pressure/Forced	
Centre Not Concentric to O/S			BOM/Route			Hardware		Over/Under tolerance		Temperature/Cure	
Cracks			Broken/Damaged			Inspection Incomplete		Part Incorrect		Weld	
Crushed/Crimped			Burrs			Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled	
Cuffs			Contamination			Maintenance		Part Moved			
Heat Treat			Countersink			Mislabeled		Positioned Wrong			
Inspection Strip in Tube			Cut Too Short			Misread		Power Loss/Surge			
Ripples in Bend			Drill Holes			Offset				Other	
Torque Waves in Extrusion			Drawing			Out of Calibration					
Turning Sequence			Finish			Out of Sequence					
Wave/Twist in Tube			Folio			Outside Dimensions					

Picklist Print

January-23-13 12:57:50 PM

Page 1

Work Order ID: 96178

Parent Item: D4131-045

Parent Item Name: Base Assembly

Start Date: 1/21/13

Required Date: 2/06/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 11.09.26 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4131-9 Label Plate		Manufactured	No			140	Each	49.0000	1	4			FF 13-04-02
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Location	Loc Qty	Loc Code
GA	49	
74267	22	
75067	27	

M304S18GA 304/316 .050 Sheet		Purchased	No			100	sf	344.5299	0.1613	0.679158			Jm 13-3-18
---------------------------------	--	-----------	----	--	--	-----	----	----------	--------	----------	--	--	------------

Location	Loc Qty	Loc Code
MAT019	21	
117188	5	
117766	5	
120604	5	
122325	3	
123155	3	
MAT020	323.529894	
120243	2	
121626	1.529894	
124029	320	

MS20615-3M3 RIVET		Purchased	No	M118384	140	Each	0.0000	2	8			FF 13-04-02
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NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions							
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>							
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <hr/>							
				<input type="checkbox"/> Other							

DART AEROSPACE LTD	Work Order:	96178
Description: Base	Part Number:	D4131-3
Inspection Dwg: D4131	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	Jyoti	Audited by:	DAS	Preliminary Approval:	
Date:	13-3-19	Date:	16	13/03/19	Date:

Rev	Date	Change	Revised by	Approved
A	10.10.25	New Issue	KJ	
B	12.03.08	Dimensions updated per Dwg Rev B	KJ	
C	12.05.15	Dimensions added per Dwg Rev B	KJ	

8

7

6

5

4

3

2

1

D

D

C

C

B

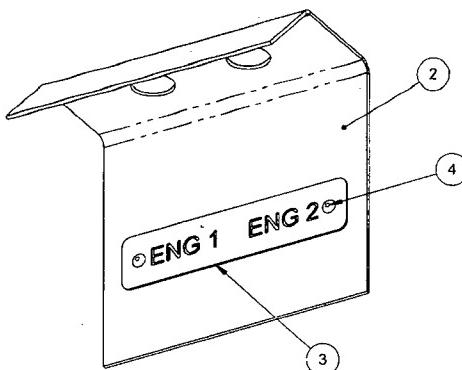
B

A

A

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.35 lbs

D4131-045 BASE ASSEMBLY

B

RELEASED
 2011-09-21

8

7

6

5

4

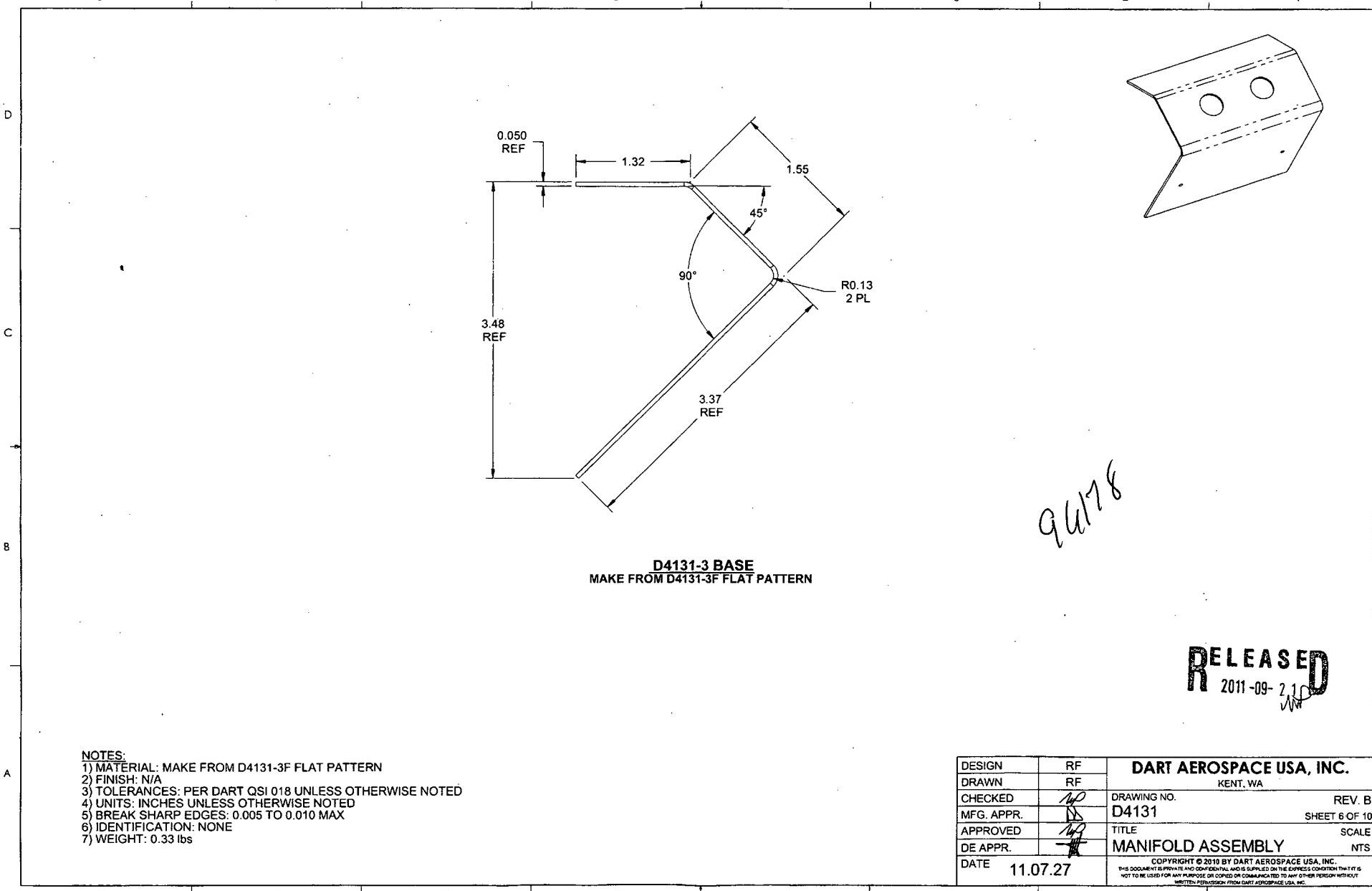
3

2

1

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>MM</i>	DRAWING NO. REV. B	
MFG. APPR.	<i>DS</i>	D4131 SHEET 3 OF 10	
APPROVED	<i>MM</i>	TITLE SCALE	
DE APPR.	<i>MM</i>	MANIFOLD ASSEMBLY NTS	
DATE	11.07.27	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PROVIDED OR BY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

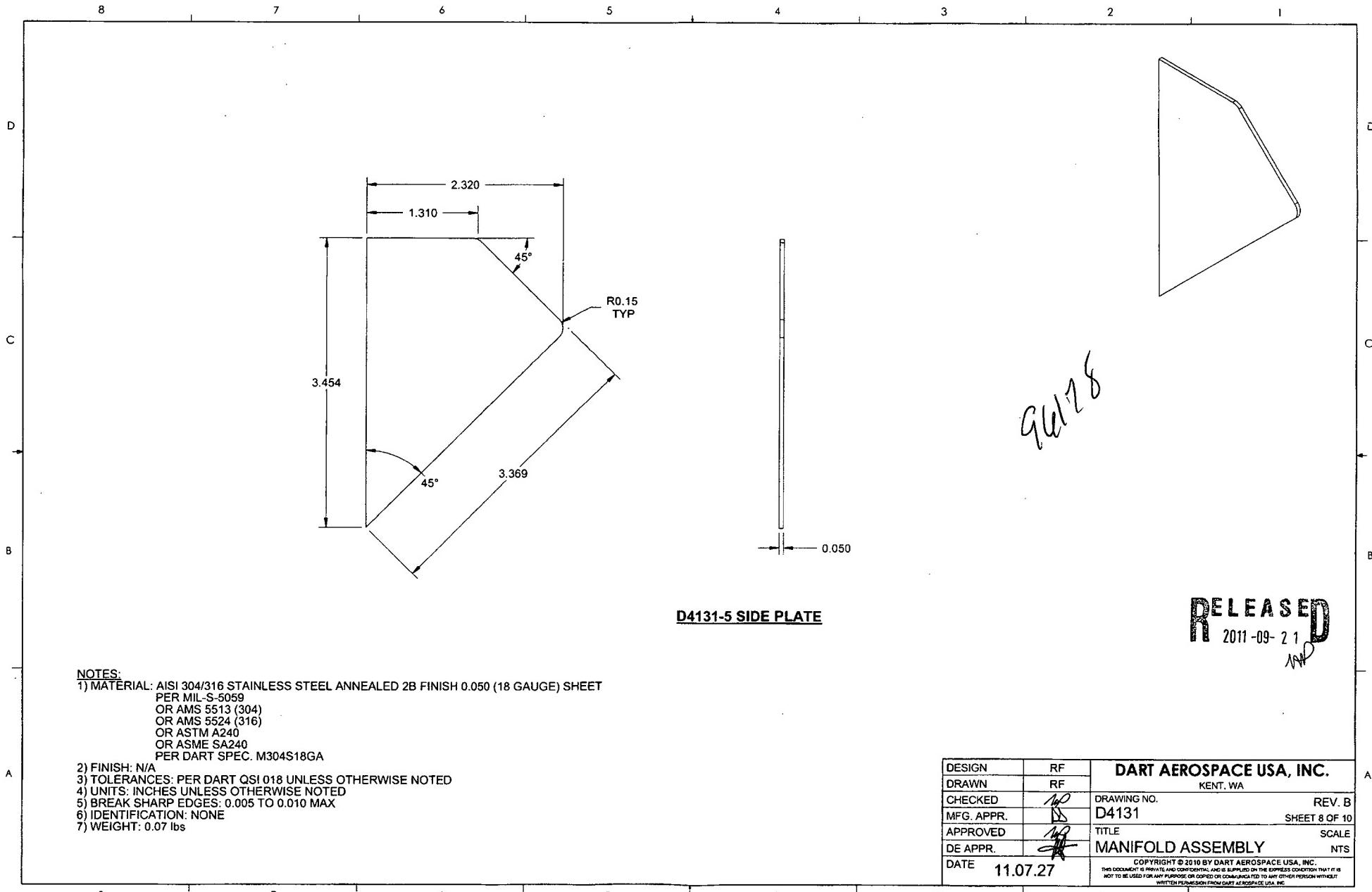


DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>MP</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>MP</i>	D4131	SHEET 6 OF 10
APPROVED	<i>MP</i>	TITLE	SCALE
DE APPR.	<i>MP</i>	MANIFOLD ASSEMBLY	
DATE	11.07.27	NTS	

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8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1



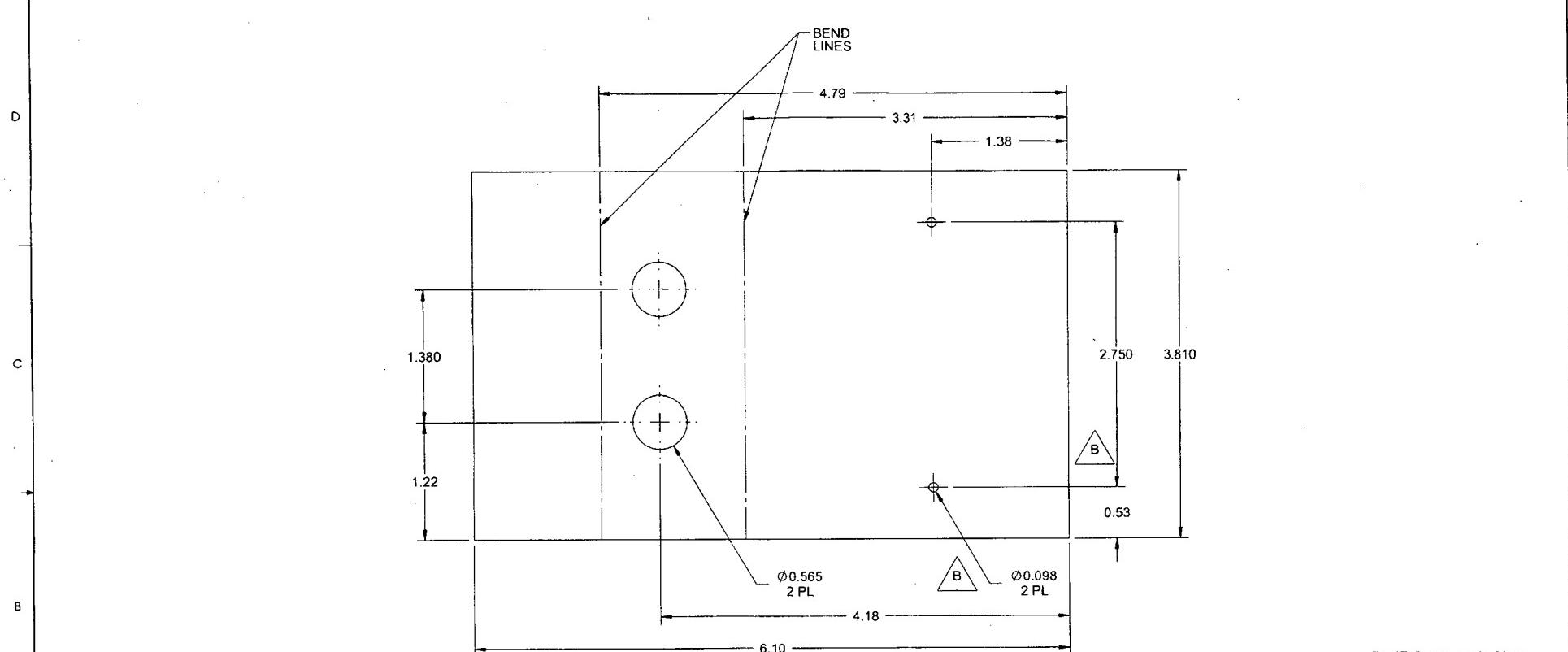
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>10</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>10</i>	D4131	SHEET 8 OF 10
APPROVED	<i>10</i>	TITLE	SCALE
DE APPR.	<i>10</i>	MANIFOLD ASSEMBLY	
DATE	11.07.27	NTS	

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8 7 6 5 4 3 2 1

A

8 7 6 5 4 3 2 1



RELEASED
R 2011-09-21

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ANNEALED 2B FINISH 0.050 (18 GAUGE) SHEET
PER MIL-S-5059
OR AMS 5513 (304)
OR AMS 5524 (316)
OR ASTM A240
OR ASME SA240
PER DART SPEC. M304S18GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.33 lbs

DESIGN	RF	DART AEROSPACE USA, INC.
DRAWN	RF	KENT, WA
CHECKED	<i>[Signature]</i>	DRAWING NO. D4131
MFG. APPR.	<i>[Signature]</i>	REV. B SHEET 7 OF 10
APPROVED	<i>[Signature]</i>	TITLE MANIFOLD ASSEMBLY
DE APPR.	<i>[Signature]</i>	SCALE NTS
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8 7 6 5 4 3 2 1